

POTTER & BRUMFIELD W54 SERIES

PUSH TO RESET ONLY P&B THERMAL CIRCUIT BREAKER

FEATURES

- 5 to 40 amp ratings.
- Push button to reset breaker. Cannot be manually tripped.
- Button extends for visual trip indication.
- Numerous mounting and termination options.
- Optional bottom marking of amperage rating.



APPROVALS

- UL/cUL: Recognized with UL 1077 (Supplementary Protectors for Use in Electrical Equipment), File E69543 (excludes models rated >35A).
- VDE: Approved to DIN EN IEC 60934/VDE 0642 (Circuit Breaker for Equipment), Certificate No. 40059799 and 40007877 (for AC loads only).
- CCC: Approved to GB/T 17701, Certificate No. 2024010307738240 and 2004010307123217 (for AC loads only).



ELECTRICAL DATA @ 25°C

Calibration	Will continuously carry 100% of rating. May trip between 101% and 134%, but must trip at 135% of rating within one hour at +25°C.	ent	1000 900 800											200	0% 5% 0% 0%	T 5.C	rip ii) - 3(1.8 - 1	o Tim No T n 1 ho 0.0 S 7.6 S	rip our ec. ec.
Dielectric Strength	1,500VAC (60 seconds)	ercei	, 700	+		$\left \right\rangle$	+			_	-	₩		400	0%	0	.6 - 3	4.5 S 3.0 S 2.2 S	ec.
Insulation Resistance	100 megohms	s A Perce Rating	600	\mathbb{N}			\setminus	$\left \right $		_			+++	800	2%	(D.2 -	2.2 S 1.2 S 0.8 S	ec.
Maximum Operating Voltages	50VDC; 250VAC	urrent As Breaker	500 400																
Interrupt Capacity	1,000 amps in accordance with UL standard 1077	-oad Cu Of E	300																
Resettable Overload Capacity	Ten times rated current		200 ¹³⁵ 100							-			<u>}</u>						
Reset Time	60 seconds		0.1		1111				1()			10	0		10	00		[]]]] 10,00
									Ti	me l	In S	Seco	ond	ls					

Note: Users should thoroughly review the technical data before selecting a product part number. It is recommended that users also seek out the pertinent approvals files of the agencies/laboratories and review them to confirm the product meets the requirements for a given application.

Thermal Circuit Breaker

TYPICAL RESISTANCE VS. CURRENT RATING @25°C

Current Rating in Amps	Typical Resistance in Ohms	Current Rating in Amps	Typical Resistance in Ohms
5.0	0.050	15.0	0.017
6.0	0.042	20.0	0.012
7.0	0.036	25.0	0.010
8.0	0.031	30.0	0.008
10.0	0.025	35.0	0.007
12.0	0.021	40.0	0.006

MECHANICAL/ENVIRONMENTAL DATA

Operating Temperature Range	0°C to +60°C
Termination	.250in (6.35mm) quick connects or #8-32 screws
Mounting Various options.	See Ordering Information and drawings
Approximate Weight	0.9 oz. (25.0g)

OUTLINE DIMENSIONS



Ambient	Rating Correction Factor										
Temperature in °C	5-8A Models	9-30A Models									
10	.90	.80									
20	.98	.90									
25	1.00	1.00									
30	1.10	1.05									
40	1.25	1.15									
50	1.61	1.31									
60	2.00	1.55									

To use this chart: Divide the breaker rating by the correction factor to determine the compensated rating.

Calculate the overloads in terms of the compensated rating to use the published trip curve.

Do not use these devices outside their specified operating temperature ranges.

OPTIONAL PROTECTIVE BOOT

Silicone rubber boot is bonded to integral metal nut.



4 Ø.630 [16.0] 1 - .622 [15.8] Ø.700 [17.8] t - .799 [20.3] 1 .654 [16.6] .787 [20.0]

1-1423696-5 Black boot for W54 with 3/8inch-24 bushing.

1-1423696-6 Clear boot for W54 with M11 X 1.0 bushing.

1-1423000-1 Clear boot for W54 with M11 X 1.0 bushing.

MOUNTING BUSHINGS AND RECOMMENDED PANEL CUTOUTS



.480 +.008, -.0 (12.2 + .2, -.0)157 (4.0) ¥ ¥ .421 +.008, -.0 .413 (10.7 +.2, -.0) 10.5) I. 496 12.6) Option 4 - M12 X 1.0 Thread



Option 2 & 7 - 3/8in - 24UNF Thread

-

.382 +.008. -.0

(9.7 +.2, -.0)

٨





Option 3 & 6 - M11 X 1.0 Thread





POTTER & BRUMFIELD W54 SERIES

Thermal Circuit Breaker

TERMINATION OPTIONS



MOUNTING HARDWARE DIMENSIONS

Dimension Code	Bushing Diameter	Plastic Knurled Nut	Integrated Plastic Knurled Nut w/ Holes	Metal Knurled Nut	Metal Hex Nut	Lockwasher
	3/8in	.74 (18.8)	-	.56 (14.2)	.55 (14.0)	.49 (12.5)
А	M11	.74 (18.8)	.74 (18.8)	.59 (15.0)	.55 (14.0)	.587 (14.9)
	M12	-	-	.59 (15.0)	.55 (14.0)	.626 (15.9)
	3/8in	.126 (3.2)	-	.079 (2.0)	.079 (2.0)	.02 (.5)
В	M11	.126 (3.2)	.13 (3.3)	.102 (2.6)	.118 (3.0)	.02 (.5)
	M12	-	-	.102 (2.6)	.079 (2.0)	.02 (.5)

MOUNTING HARDWARE ORDERING INFORMATION

Dimension Code	Bushing Diameter	Plastic Knurled Nut	Integrated Plastic Knurled Nut w/ Holes	Metal Knurled Nut	Metal Hex Nut	Lockwasher
	1 (M11)	-	-	6-1423730-3	6-1423730-7	1-1423696-2
Metal	2 (3/8in)	-	-	6-1423730-4	6-1423730-6	1-1423696-1
	4 (M12)	-	-	6-1423730-5	6-1423730-8	1-1423696-3
Plastic	6 (M11)	1423696-8	2-1423696-2	-	-	-
Plastic	8 (3/8in)	1423696-2	-	-	-	_

ORDERING NOTE:

Mounting hardware can be ordered separately. Some options are subject to extended leadtimes and significant minimum order quantities.

PRODUCT CODE STRUCTURE

				Тур	ical p	orodu	ict co	ode					
			W 5	54 -	ХВ	1 A	4 A	10	-5				
esigna	tor									Specif	fy Amp R	ating	
W	Circuit breaker										5	10	25†
											6	12	30 ⁺
eries N	umber										7	15	35 ⁺
54	Single pole, push-to-reset, thermal model										8	20	40 [†]
ircuit F	unction & Contact Material									Name	plate		†not UL/cl
	Series trip, silver-cadmium oxide contacts							1		0	None		
х	(VDE covers up to 20A, CCC covers up to 30A)				'					1	Embo	ossed aluminur	n
F	Series trip, silver-tin oxide contacts	_								2	Silver	color printing	on black
-										3	Black	printing on sil	ver color
lumber	of NC contact configurations									Maxim	num Oper	ating Voltage	
Α	White, plain, no rate marking									1	250V	AC / 50VDC*	
в	White with rate marking (vertical)									2		AC / 50VDC*	
D	Black, plain, no rate marking												apply to UL or
Е	Black with rate marking (horizontal)											Defatility	
F	White with rate marking (horizontal)									Mount	ting Hard	ware Packagir	g
н	Black with rate marking (vertical)						L			A	Asser	nbled to bushi	na
I	Red, plain, no rate marking									B		unassembled	
lountin	g Bushing Metal									Mount	ting Hard	ware	
	9.8mm (double D) x 12.6mm long, M11x1											Metal	
1	threads, hex base									4	Knurle	ed nut/hex nut	
2	3/8in (single D) x 10mm long, 3/8inx24									6	Hex n	ut	
2	threads, hex base									12	Knurle	ed nut	
3	9.8mm (double D) x 12.6mm long, M11x1									15	Two h	ex nuts and or	ne lockwasher
	threads, round base									18	One h	ex nut and one	e lockwasher
4	10.5mm (double D) x 12.6mm long, M12x1											Plastic	
-	threads, round base	_								7	Knurle	ed nut	
	Plastic									8	Knurle	ed nut with sm	all hole
6	9.8mm (double D) x 12.6mm long, M11x1									22	Knurle	ed nut, metal lo	ockwasher
-	threads, round base									99	None		
7	3/8in (single D) x 10mm long, 3/8inx24 threads, hex base									Termi	nale		
8	Snap-in type									_			
						_							35mm), straigh
quivalen	-										Quick con 90°	nect .250in (6.	35mm), bent
	s similar in size to a 15/32in bushing (not exac	2								C #	‡8-32 scre	ew, bent 90° (s	crews installed)
quivalen	τ)										Quick con 15°	nect .250in (6.	35mm), bent
										E	Quick con	nect .250in (6.	35mm), bent

te.com

©2025 TE Connectivity plc Family of Companies. All Rights Reserved.

TE Connectivity, TE connectivity (logo) and Every Connection Counts are trademarks owned or licensed by the TE Connectivity plc family of companies. All other logos, products and/or company names referred to herein might be trademarks of their respective owners.

Е

90° opposite

F #8-32 screw, bent 45° (screws installed)

While TE has made every reasonable effort to ensure the accuracy of the information in this document, TE does not guarantee that it is error-free, nor does TE make any other representation, warranty or guarantee that the information is accurate, correct, reliable or current. TE reserves the right to make any changes to the information contained herein without prior notice. TE Connectivity assumes only those obligations set forth in the terms and conditions for this product and shall in no event be liable for any incidental, indirect, or consequential damages arising out of the sale, resale, use, or misapplication of the product. TE expressly disclaims any implied warranties with respect to the information contained herein, including, but not limited to, implied warranties of merchantability or fitness for a particular purpose. Dimensions, specifications and/or information contained herein are for reference purposes only and are subject to change without notice. Consult TE for the latest dimensions, specifications and/or information. Users of TE Connectivity products must make their own assessment as to whether the respective product is suitable for the respective desired application.

07/25 ED

